



Citation for published version:

Richardson, T 2009, 'Challenges for the scientist-practitioner model in contemporary clinical psychology', *Psych-Talk*, vol. 62, pp. 20-26.

Publication date:
2009

Document Version
Peer reviewed version

[Link to publication](#)

Permission received with thanks from BPS Psych-Talk editor to make this version available. 5/4/2011

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Challenges for the scientist-practitioner model in contemporary clinical psychology

The Jam
Your articles,
your work

Thomas Hugh Richardson, Trinity College Dublin.

The scientist-practitioner model of clinical psychology is the most widely used model in doctoral training schemes throughout the Western world today. However, there are a number of controversies with its implementation into modern clinical practice. This paper discusses such issues, focusing on a number of key areas; controversies surrounding evidence-based practice, conflicts with idiographic approaches to treatment, discussions over whether clinical psychologists can be both scientist and practitioner, and possible alternative models.

IN 1949, the major names in clinical psychology in the US met in Boulder, Colorado, to discuss the state of clinical psychology after the Second World War. This conference, and subsequent proceedings (Raimy, 1950), led to the development of what has become known as the ‘scientist-practitioner’ model of clinical psychology. This model entailed a combination of the scientific basis of psychology with its application to clinical practice, so that clinical psychologists were trained to be both a scientist, and a practitioner (Raimy, 1950). Scientist-practitioners would embody an integrated approach to both practice and science, adopting a research-based approach to practice, and a practice-based approach to research, with each complementing the other. This model has been reinforced by subsequent conferences such as the Stanford conference (Strother, 1957) and the Miami conference (Roe et al., 1959). The scientist-practitioner model has been generally widely accepted, being described by clinical psychologists as ‘the hallmark of our discipline’ (Carter, 2002). However, since its inception nearly 60 years ago, the scientist-practitioner approach to clinical psychology has been a source of considerable controversy, with a number of discussions over its suitability (e.g. Albee, 1970; Mittelstaedt & Tasca, 1988). Those working in the mental health system have found it hard to implement into professional practice (Milne & Paxton, 1998), and debate has occurred over whether or not these two roles are actually combined (Barlow, 1981), and whether it is necessary to do so (Shakow, 1978). This paper discusses issues and challenges surrounding the implementation of the scientist-practitioner in clinical psychology today, focusing on a number of key areas; controversies surrounding evidence-based practice, conflicts with idiographic approaches to treatment, discussions over whether clinical psychologists can be both a scientist and a practitioner, and possible alternative models.

Evidence-based practice

An increasingly important concept relevant to the scientist-practitioner model within clinical psychology is that of evidence-based practice. The evidence-based practice movement is a relatively new phenomenon in psychology, which intends to improve the care given to patients by using the best available evidence at hand, combined with the clinician’s practical expertise (Luebbe et al., 2007). Within many countries in the Western world, health care systems have moved to evidence-based uptake of psychological services (e.g. Clinical Outcomes Group,

1995; Task Force on Promotion and Dissemination of Psychological Procedures, 1995). As a result of increasingly strict guidelines, psychologists are increasingly having to show that their work is effective (Roth & Parry, 1997). Such changes have led to authors suggesting that science might aid practice (Seligman, 1996). These changes are significantly changing the context in which clinical psychologists work in health settings. As a result, clinical psychology may have to move from its moderate research base (Milne, Britton & Wilkinson, 1990), to a more realised scientist-practitioner approach (Hayes, 1996). One important part of this is self-regulation; demonstrating that a practitioner's work is effective with their patients through outcome assessment (Barlow, Hayes & Nelson, 1984), which improves accountability (Sox & Woolf, 1993). Lucock et al. (2003) suggest that evidence-based practice can enhance the ability of the therapist to reflect on the way in which they practice.

Empirically-supported treatments (ESTs) are treatments which have received empirical support within the literature regarding their effectiveness. The idea that the use of psychotherapeutic procedures should be informed by appropriate evidence is well documented (Parry, 2000), and psychology has moved away from clinicians' subjective views of treatment effectiveness, towards the empirical evaluation of therapeutic outcomes (Kendall, 1998). Clinical psychology is increasingly adopting ESTs; treatments which have been shown to be effective in large-scale randomised clinical trials with specific clinical populations (Chambless & Hollon, 1998). Works such as the Task Force on Promotion and Dissemination of Psychological Procedures in 1995, have drawn up lists of ESTs which are deemed to be empirically-supported enough to warrant their use. Such moves have been praised by many authors (e.g. Hudson, 1997). Technical developments have led to the introduction of therapeutic treatment manuals and standardised outcome measures into practice, which have been used to apply ESTs (Wilson, 1996). Practice guidelines are also increasingly being put into place (Hayes, 1998), and such standardization of treatments has been argued to improve care and increase accountability in practice (Marques, 1998). Evidence-based practice, in particular by the use of Empirically-Supported Treatments, is seen by many as consistent with the concept of a scientist-practitioner, as clinicians improve on their practice through conducting and applying relevant research (Woolf & Atkins, 2001).

Evidence-based practice, however, is often not implemented; most of the 400 different psychotherapeutic procedures in use have not been empirically tested (Lampropoulos, 2000). A number of authors have voiced their concerns over the application of ESTs (e.g. Calhoun et al., 1998), and criticised the implications of evidence-based practice (Silverman, 1996). A number of specific criticisms have been levied at ESTs, for example, that they reduce potential for clinical innovation (Davison & Lazarus, 1994). Davison (1998) argues that ESTs will reduce creative insights, and reduce openness to new ideas. Parry, Cape and Pilling (2003) suggest that ESTs need to be supported by other methods, and that procedures need to be put in place to monitor whether such treatments are accurately practiced in therapy. Audin et al. (2001) argued that, rather than ESTs, 'Practice Research Networks' should be established, which enable clinicians to collaborate and conduct research which they can directly apply to their practice. It has been pointed out that ESTs are mainly used in research settings (Neville & Ollendick, 2000), and some have even gone so far as to say that they have made almost no difference to practice (Andrews, 2000). Addis, Wade and Hatgis (1999) outline a number of problems with the implementation of ESTs. Such problems include the length and number of sessions suggested by ESTs, which are unrealistic in practice, and the diagnostic-specificity of ESTs (Addis, 2002). A survey of practicing psychologists (Addis & Krasnow, 2000) revealed that many believed that ESTs would detract from a therapeutic relationship. Addis (2002) argued that in reality, there is simply not enough time for clinicians to integrate evidence into their practice, as consulting all the relevant literature on top of working caseloads is unrealistic.

Thus, there are a number of criticisms of evidence-based practice, and it is clear that many clinicians are reluctant to integrate research into their practice. This demonstrates that the scientist-practitioner model is often not been implemented, and perhaps is not feasible in the everyday practice context.

Idiographic approaches to treatment

An important component in the scientist-practitioner debate is over idiographic approaches to treatment. This approach focuses on the individual, and holds that research is often not applicable to practice, as personal judgments based on clinical experience regarding the individual case at hand are more useful than applying generalised research. This is relevant to empirically-supported treatments, as those who argue in favour of an idiographic approach suggest that expert opinion must be used to decide whether or not an empirically-supported treatment is useful (Davison, 1998). Such clinical innovations involve data collection, though in a different way to experimental procedures, which make important contributions to the therapeutic process (Davison & Lazarus, 1995). Similarities have been drawn between research methods and clinical practice, for example, hypothesis formation and testing happens in both experimental research and applied clinical work (Spengler et al., 1995; Persons, 1991). Tailoring treatments to the individual needs of the patient has always been an important part of behaviour therapy, in particular in applied behaviour analysis, which stands out due to the importance it places on single-cases, and a key aspect being identifying specific variables which maintain the problems in individual patients. The behaviour therapy literature contains various cases where the assessment of personalised cases has lead to non-standardised, yet effective, treatments (Lazarus, 1971). Goldfried (1983) stresses the importance of cues during therapy, and the importance of environmental forces on the individual in making clinical decisions.

Single case experimental designs have been shown to be effective in demonstrating causal relationships between treatment and outcome, and such designs have been put forward as a way to help to bridge the gap between research and practice (Hersen & Barlow, 1976). An important new field within this is 'patient focused research' (Howard et al., 1996) which aims to evaluate psychotherapy by monitoring individual patient's outcome. Such research is increasing being recognised as an important component of clinical practice (Kazdin, 1996). It has been argued that manual-based treatments inaccurately assume that patients have the same problems for the same reasons, and that individual case formation does not make this assumption (Persons, 1991). It has also been pointed out that diagnostic categories are at best, only rough guides to which treatment is appropriate (Wilson, 1996), as there are considerable differences between individuals in the same diagnostic category (Poland, Von Eckardt & Spaulding, 1994), and manual-based treatment cannot deal with such heterogeneity (Persons, 1991). Research also rarely examines those with co-morbid problems, though such co-morbidity is common place in clinical practice, and text-book cases are rare (Wilson, 1996). Carter (2002) goes as far as to say that those whose practice is driven mainly by research are reckless, as they do not learn from experience. The important point here is that idiographic approaches see research as conflicting with individual case formations, and thus such approaches view science as largely irrelevant to practice.

However, a number of criticisms have been levied at the idiographic approach to treatment. It has been argued that such an approach leads to practitioners not basing their work on evidence of any kind, and that clinical experience is merely personal opinion (Beutler, Molerio & Telebi, 2002). Cater (2002) points out that there is little known about the processes by which practitioners generate and evaluate evidence about their patients. A number of biases in clinical judgment have been outlined such as confirmatory bias and judgmental heuristics (Stoltenberg et al., 2000). Clinical psychologists have been found to miss relationships between

events when present, and at other times detect it when there is none (Chapman & Chapman, 1969). They also often state the importance of certain relationships based on prior expectations, rather than evidence in the case at hand (O'Donohue & Szymanski, 1994). Clinical effectiveness and accuracy of judgments have been found not to increase with additional training or increased years of experience (Lichtenberg, 1997; Watts, 1980), and consequently it has been argued that clinicians should be guided by the literature as much as possible, rather than their own clinical experiences (Garb, 1994). Clinical intuition and personal judgments in therapy have been shown to be inconsistent, and lead to errors which can in fact harm patients (O'Donohue & Szymanski, 1994). Research has shown that standardised treatments have superior outcomes compared to individual case formation (Schulte et al., 1992), and case studies have been criticised for a number of reasons (Kazdin, 1981). Thus there is evidence to suggest that idiographic approaches to treatment are unreliable and un-scientific compared with treatment based on research. This demonstrates the gap between practice and research in therapy, and shows how the scientist-practitioner model of therapy is rarely truly implemented in contemporary clinical psychology practice.

Is it possible to be a scientist *and* a practitioner?

The scientist-practitioner model of clinical psychology holds that clinical psychologists should be both scientists and practitioners; therefore, it is important to consider whether this is possible. A split between research and practice has been noted since 1961 (Joint Commission on Mental Illness and Health, 1961). The majority of clinical psychology doctorate degrees claim to adopt the scientist-practitioner model, yet in reality they place more emphasis on research (Strieker, 1992), even though the vast majority of graduates move on to a career in practice (Garfield & Kurtz, 1976; Parker & Detterman, 1988). A number of authors have suggested that individuals cannot, and should not be trained as both practitioners and scientists (e.g. Hughes, 1952; Strupp, 1982). In the Netherlands, clinical training courses now end in a specialization in either research or practice, but not both (Holdstock, 1994). An important finding here is that practitioners rarely do research. In fact, the average number of annual publications for practitioners is zero (Levy, 1962), and a small number of clinical psychologists are responsible for the vast majority of studies (Norcross, Prochaska & Gallagher, 1989). Martin (1989) found that although the scientist-practitioner has widespread report, the majority of practitioners do not conduct research, and do not even read the current literature. It has been argued that scientists and practitioners require different personality characteristics, and that scientists and professionals have important fundamental differences (Strieker, 1992). Thus, it is clear that there are very few individuals who are true scientist-practitioners. This suggests that a major downfall of the model is the assumption that clinical psychologists should be both. It seems more useful to have researchers and practitioners separately, who collaborate and communicate with each other.

Alternative models

In response to the criticisms described previously, a number of authors have developed alternative approaches to the scientist-practitioner model of clinical psychology. Hayes (1996) argues for the development of an 'empirical clinician'. This version of the traditional model emphasises the application of empirically-supported procedures, rather than focusing on whether the clinician themselves are effective in treatment. This model calls for the development of the most effective professional therapies, and highlights the importance of practice based on science, and an importance being placed on the beliefs of the patient. Changes in the professional working environment for clinical psychologists in the UK has led Peckham (1991) to call for a 'clinical scientist' model, with the emphasis being on research, and an

ability to empirically validate procedures so that they can be put to use in practice. Another theory claimed to bridge that gap between science and practice is the 'local clinical scientist' approach (Stricker & Trierweiler, 1995). This is a more procedural approach in which the local clinical scientist approaches practice issues such as therapy with the same critical and controlled thinking that would be used by a scientist working in a laboratory. Thus research with large sample numbers is of little interest, and the main focus is on the local practical context, with a scientific attitude being used to solve specific therapeutic problems. The 'scientist model' has been put forward, suggesting that clinical psychologists should have strict theoretical principles, and should only use treatment techniques empirically shown to be effective in the given context (Pilgrim & Treacher, 1992). Empirical knowledge would be able to inform practice. The 'practitioner model' suggests that therapeutic techniques should be learned not from research, but from other practitioners (Barlow, Hayes & Nelson, 1984). Whilst such models have been discussed, there has been little real progress in presenting a new model of clinical psychology, and the scientist-practitioner approach still dominates the field.

Conclusion

This paper has reviewed the scientist-practitioner model as an approach to clinical psychology. Whilst the model has achieved general support, there seem to be a number of problems with its implementation. Evidence-based practice is an important component of this model, yet there are a number of critics of the implementation of empirically-supported treatments, and a number of problems with their use. In particular, resistance is met in those who prefer an idiographic approach to case formation. There is also evidence that shows that people are rarely both practitioners and scientists, and thus the model's specification that clinical psychologists should be both is unrealistic. In addition, a number of alternative models have been proposed. Thus, this paper agrees with the general view that the model has overall been very successful (Strickland, 1983), but also agrees with other work (e.g. Milne & Paxton, 1998) that nowadays, the scientist-practitioner model, as traditionally conceived, is unrealistic. The scientist-practitioner model assumes a mutuality of science and practice which is rarely present. Thus this paper concludes that the scientist-practitioner model is a useful, but unrealistic, approach to working with patients, and suggests clinical psychologists should attempt not to be both, but to improve the communication and co-operation between scientists and practitioners alike.

Contact e-mail:

thomashughrichardson@gmail.com

References

- Addis, M.E. (2002). Methods for disseminating research products and increasing evidence-based practice: Promises, obstacles, and future directions. *Clinical Psychology Science and Practice*, 9, 367–378.
- Addis, M.E. & Krasnow, A.D. (2000). A national survey of practicing psychologists' attitudes towards psychotherapy treatment manuals. *Journal of Consulting and Clinical Psychology*, 68, 331–339.
- Addis, M.E., Wade, W. & Hatgis, C. (1999). Barriers to evidence-based practice: Addressing practitioners' concerns about manual-based psychotherapies. *Clinical Psychology: Science and Practice*, 6, 430–441.
- Albee, G.W. (1970). The uncertain future of clinical psychology. *American Psychologist*, 25, 1071–1080.
- Andrews, H.B. (2000). The myth of the scientist-practitioner: A reply to R. King (1998) and N.J. King & T.H. Ollendick (1998). *Australian Psychologist*, 35, 60–63.
- Audin, K., Mellor-Clark, J., Barkham, M., Margison, F., McGrath, G., Lewis, S., Cann, L., Duffy, J. & Parry, G. (2001). Practice Research Networks for effective psychological therapies. *Journal of Mental Health*, 10, 241–251.
- Barlow, D.H., Hayes, S.C. & Nelson, R.O. (1984). *The Scientist-Practitioner: Research and accountability in clinical and educational settings*. New York: Pergamon.

- Barlow, D.H. (1981). On the relation of clinical research to clinical practice: Current issues, new directions. *Journal of Consulting and Clinical Psychology*, 49, 147–55.
- Beutler, L.E., Moleiro, C. & Telebi, H. (2002). How practitioners can systematically use empirical evidence in treatment selection. *Journal of Clinical Psychology*, 58, 1199–1212.
- Clinical Outcomes Group (1995). *Research and development and clinical audit*. Unpublished paper. Leicester: British Psychological Society.
- Calhoun, K.S., Moras, K., Pilkonis, P. & Rehm, L.P. (1998). Empirically-supported treatments: Implications for training. *Journal of Consulting and Clinical Psychology*, 66, 151–162.
- Carter, J.A. (2002). Integrating science and practice: Reclaiming the science in practice. *Journal of Clinical Psychology*, 58, 1285–1290.
- Chambless, D.L. & Hollon, S.D. (1998). Defining empirically-supported therapies. *Journal of Consulting and Clinical Psychology*, 66, 17–19.
- Chapman, L.J. & Chapman, J.P. (1969). Illusory correlation as an obstacle to the use of valid psychodiagnostic signs. *Journal of Abnormal Psychology*, 74, 193–204.
- Davison, G.C. (1998). Being bolder with the Boulder Model: The challenge of education and training in empirically-supported treatments. *Journal of Consulting and Clinical Psychology*, 66, 163–167.
- Davison, G.C. & Lazarus, A.A. (1995). The dialectics of science and practice. In S.C. Hayes, V.M. Follette, R.M. Dawes & K.E. Grady (Eds.), *Scientific standards of psychological practice: Issues and recommendations*. Reno, NV: Context Press.
- Davison, G.C. & Lazarus, A.A. (1994). Clinical innovation and evaluation: Integrating practice with inquiry. *Clinical Psychology: Science and Practice*, 1, 157–168.
- Garb, H.N. (1994). Judgment research: Implications for clinical practice and testimony in court. *Applied and Preventive Psychology*, 3, 173–184.
- Garfield, S.L. & Kurtz, R. (1976). Clinical psychologists in the 1970s. *American Psychologist*, 31, 1–9.
- Goldfried, M.R. (1983). The behavior therapist in clinical practice. *Behavior Therapist*, 6, 45–46.
- Hayes, S.C. (1998). Market-driven treatment development. *Behavior Therapist*, 21, 32–33.
- Hayes, S.C. (1996). Creating the empirical clinician. *Clinical Psychology: Science & Practice*, 3, 179–181.
- Hersen, M. & Barlow, D.H. (1976). *Single-case experimental designs: Strategies for studying behavior change*. New York: Pergamon Press.
- Hudson, A. (1997). Empirically validated treatments. *Behaviour Change*, 14, 1–28.
- Hughes, E.C. (1952). Psychology: Science and/or profession. *American Psychologist*, 7, 441–443.
- Holdstock, T.L. (1994). The education and training of Clinical Psychologists in the Netherlands. *Professional Psychology: Research and Practice*, 25, 70–75.
- Howard, K.I., Moras, K., Brill, P.C., Martinovich, Z. & Lutz, W. (1996). Evaluation of psychotherapy: Efficacy, effectiveness, and patient progress. *American Psychologist*, 51, 1059–1064.
- Joint Commission on Mental Illness and Health (1961). *Action for mental health*. New York: Science Editions.
- Kazdin, A.E. (1996). Evaluation in clinical practice: Introduction to the series. *Clinical Psychology: Science and Practice*, 3, 144–145.
- Kazdin, A.E. (1981). Drawing valid inferences from case studies. *Journal of Consulting and Clinical Psychology*, 49, 183–192.
- Kendall, P.C. (1998). Empirically-supported psychological therapies. *Journal of Consulting and Clinical Psychology*, 66, 3–6.
- King, N.J. & Ollendick, T.H. (2000). In defence of empirically-supported psychological interventions and the scientist-practitioner model: A response to Andrews (2000). *Australian Psychologist*, 35, 64–67.
- Lampropoulos, G.K. (2000). A re-examination of the empirically-supported treatments critiques. *Psychotherapy Research*, 10, 474–487.
- Lazarus, A.A. (1971). *Behavior therapy and beyond*. New York: McGraw-Hill.
- Levy, L.H. (1962). The skew in clinical psychology. *American Psychologist*, 77, 244–249.
- Lichtenberg, J.W. (1997). Expertise in counselling psychology: A concept in search of support. *Educational Psychology Review*, 9, 221–238.
- Lucock, M., Leach, C., Iveson, S., Lynch, K., Horsefield, C. & Hall, P. (2003). A systematic approach to practice-based evidence in a psychological therapies service. *Journal of Clinical Psychology and Psychotherapy*, 10, 389–399.
- Luebbe, A.M., Radcliffe, A.M., Callands, T.A., Green, D. & Thorn, B.E. (2007). Perceptions of graduate students in scientist-practitioner programmes. *Journal of Clinical Psychology*, 63, 643–655.
- Marques, C. (1998). Manual-based treatment and clinical practice. *Clinical Psychology: Science and Practice*, 5, 400–402.
- Martin, P.R. (1989). The scientist-practitioner model and clinical psychology: Time for change? *Australian Psychologist*, 24, 71–92.

- Milne, D. & Paxton, R. (1998). A psychological re-analysis of the scientist-practitioner model. *Clinical Psychology and Psychotherapy*, 5, 216–230.
- Milne, D.L., Britton, P.G. & Wilkinson, I. (1990). The scientist-practitioner in practice. *Clinical Psychology Forum*, 30, 27–30.
- Mittelstaedt, W. & Tasca, G. (1988). Contradictions in clinical psychology training: A trainees' perspective of the Boulder Model. *Professional Psychology: Research and Practice*, 9, 353–355.
- Watts, F.N. (1980). Clinical judgement and clinical training. *British Journal of Medical Psychology*, 53, 95–108.
- Wilson, G.T. (1996). Manual-based treatments: The clinical application of research findings. *Behaviour Research and Therapy*, 34, 295–314.
- Woolf, S.H. & Atkins, D.A. (2001). The evolving role of prevention in health care: Contributions of the US Preventive Service Task Force. *American Journal of Preventive Medicine*, 29, 13–20.